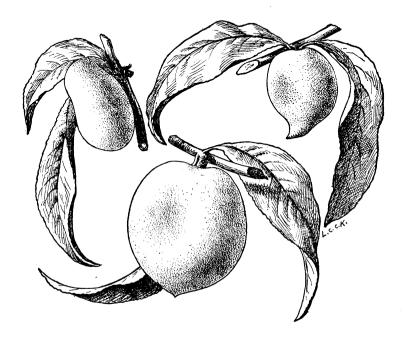
Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

PEACH VARIETIES AND THEIR CLASSIFICATION

H. P. GOULD

Pomologist, Office of Horticultural and Pomological Investigations



FARMERS' BULLETIN 918 UNITED STATES DEPARTMENT OF AGRICULTURE

Contribution from the Bureau of Plant Industry
WM. A. TAYLOR, Chief

Washington, D. C.

Issued December 30, 1914, as No. 633; revised, January, 1918

Show this bulletin to a neighbor. Additional copies may be obtained free from the Division of Publications, United States Department of Agriculture

IN SELECTING fruit varieties for planting one should take into account (1) their adaptability to the conditions in the locality where they are to be planted, (2) their suitability or value for the purpose for which they are to be grown, (3) their season of ripening, and in many cases the order of their ripening with reference to other sorts grown in the same orchard and in other localities.

These features are presented in this bulletin with a view to impressing their importance upon the prospective peach grower who is without previous experience. In the past many orchards have been planted and well cared for until they reached bearing age only to prove after bearing began that they could not be profitable because the varieties planted were not wisely selected.

Lists of peach varieties that are being grown in many different regions throughout the country, with their approximate dates of ripening, make up the body of the bulletin.

Brief reference is made also to the classification of peaches into different races and its significance from the standpoint of their adaptability to different regions.

Cultural practices in the growing of peaches are presented in considerable detail in Farmers' Bulletin 917, which can be secured free of cost on request to the Department of Agriculture.

PEACH VARIETIES AND THEIR CLASSIFICATION.

CONTENTS.

| | Page. | | Page |
|--------------------------------------|-------|---------------------------|------|
| Varieties of peaches | 3 | Classification—Continued. | |
| Varieties grown in the United States | 4 | South China race | 14 |
| Comments on the foregoing lists | 13 | | |
| Classification | 13 | North China race | |
| Peen-to race | | Persian race. | |

VARIETIES OF PEACHES.

ONE of the great problems which peach growers have to consider is involved in the question, which is asked with great frequency, "What varieties shall I plant?" Success or failure, financially, is often determined by the way in which the question is answered. It has to be answered by some one in the development of every orchard. There is usually a chance for the exercise of individual choice within certain limits and the selection of favorite varieties, if there are any. The environment must be considered in the relation of its many factors to the behavior of the varieties, the market conditions that must be met, and transportation facilities.

In many cases, the sequence of ripening is of very great importance and presents one of the most difficult problems to adjust satisfactorily. If a grower whose entire enterprise is the production of peaches wishes to ship fruit throughout the longest possible period, it is essential that his varieties be so selected that they will give him a continuous supply of fruit. Otherwise, there will be periods when his crew will have to be idle on account of breaks in the sequence of ripening; or it may be that at some periods he will have more varieties ripening at the same time than he can handle with the crew which is adequate for the greater portion of the crop. Either extreme presents a serious economic condition in the management of the orchard. To handle the crop satisfactorily and economically, a continuous and uniform supply of fruit is essential.

While the matter of the adaptability of varieties to different conditions calls for much consideration, it is usually a factor that is less 27815°-18-Bull 918

acute than it is with many other fruits. In other words, there are doubtless a good many more varieties of peaches that will develop to a good degree of perfection under a wider range of conditions than is true of many of our other kinds of fruits. But the selection of varieties for growing in different sections that will ripen at a time when the markets are not overstocked is the real problem in this connection. Some districts owe their prominence and importance as peach-growing centers largely to the fact that some of the best market varieties ripen in those districts at times when they usually bring exceptionally large prices, because at those times relatively little fruit is being marketed from other districts.

In the further extension of the peach industry, the selecting of locations with reference to this factor is likely to contribute more to the financial success of the enterprise than the mere choosing of varieties that do well, but without regard to the time when they ripen in comparison with the peach season of other districts.

Thus, a peach grower in New Jersey may know that the Greensboro peach does well under his conditions, but that he can not market it to advantage when there is a good crop of Elberta peaches in Georgia, though it is profitable in seasons of light crops in Georgia. Similarly the Salway peach was formerly a profitable variety to grow in some parts of California, but in certain sections of that State it can not now compete to advantage with the Elberta peach from Colorado. Accordingly, the Salway peach is not found in many of the younger orchards in certain districts of California in which it was formerly a variety of considerable prominence.

From the foregoing statements the difficulty incident to the making of suggestions for the guidance of prospective peach planters in selecting varieties becomes apparent. The prospective peach planter can probably find a better guide as to varieties in the results obtained by experienced growers than by using any other source of information.

VARIETIES GROWN IN THE UNITED STATES.

For the purpose of assembling information concerning the distribution of different varieties in different regions, approximate ripening periods, etc., a large number of growers in many representative districts throughout the country were requested to advise the Department of Agriculture as to the varieties of peaches that had proved to be the most desirable to grow either for commercial purposes or for home use under their respective conditions; also to give as nearly as possible the average date when the ripening season begins of each variety which they might name. A large number of responses were made to this request, and the information thus supplied is compiled below.

The data are arranged alphabetically by States, and under each State the varieties are grouped by counties. The general location of each county or group of counties within the different States is also indicated. The varieties are placed in each list approximately in the order of ripening.

In making use of these data the reader must observe certain cautions to avoid being misled. Attention is directed to the following items:

- (1) The variety lists are only suggestive as to desirable sorts to plant in the different sections.
- (2) The sequence of ripening as indicated by the order of arrangement of the varieties in the different lists is only approximate.
- (3) The dates of ripening as given for the different varieties are only approximate. In some instances, where conditions vary widely within the counties grouped together. the ripening dates of a variety will be found to differ greatly in different orchards.
- (4) The mention of a county in the following lists must not be construed as evidence that the conditions therein are necessarily favorable to the development of a profitable The data regarding variety distribution and ripening may be useful. nevertheless.
- (5) On the other hand, there are many localities in counties not named in any of the lists which are admirably adapted to peach growing. No attempt has been made to furnish a complete inventory of the counties in which peach culture is successful: therefore the omission of the names of counties in this connection is absolutely without significance so far as their adaptability to peach growing is concerned.

If the reader observes these cautions and regards the varietal data as a means of helping him to reach wise conclusions and not as fully considered and definitely stated facts, it is believed that this assemblage of variety lists will be of some value.

Lists of peach varieties, showing approximate dates and sequence of ripening in different sections, arranged by States and counties.

| State and section. | Varieties. | Begin to ripen. | State and section. | Varieties. | Begin to ripen. |
|--|---|---|--|---|--------------------------------------|
| ALABAMA. Mobile, Escambia, and Washington Counties (southwest). | Arp Greensboro Carman Rivers Hiley Slappey Belle Elberta | May 28. June 8. June 10. June 15. Do. | ARKANSAS. Benton, Boone, and Washington Counties (northwest). | Alexander | Do. June —. Do. July 10. July 15-25. |
| Cleburne and Lee Coun- ties (east central). | Carman | June 15. June 25. July 1. July 10. | Pike County (southwest). | Elberta 1. Heath Elberta 2. | July 25. |
| Dekalb County (northeast). | Carman Waddell. Mountain Rose. Belle. Ray Elberta. | July 10. July 20. Do. Do. | Graham County (southeast). | Elberta ³ . Indian Cling Perkins Salway Stinson. | |

¹ Elberta is considered the only variety of commercial importance and is estimated to comprise 95 per cent of all the peaches planted in some localities in this section.
² Carman, Mamie Ross, and other early sorts are grown to a very limited extent; Salway and other late varieties are produced in small quantities and develop to a good degree of perfection, but the prevailing prices received for them are unsatisfactory.
⁸ This variety is reported to be the most reliable as to crop.

Lists of peach varieties, showing approximate dates and sequence of ripening in different sections, arranged by States and counties—Continued.

| State and section. | Varieties. | Begin to ripen. | State and section. | Varieties. | Begin to ripen. |
|---|--|--|---|---|--|
| CALIFORNIA. San Diego County (south). | Japan Dwarf Early Crawford. Strawberry. Late Crawford. Yellow Cling Salway. | June 20-July 1. July 4-15. July 15-Aug. 1. Aug. 20-Sept. 10. Sept. 20-Oct. 10. Oct. 20-Nov. 15. | california— continued. Amador, El- dorado, and Placer Coun- ties (central foothills). | Alexander Triumph Early Hale Imperial Early Crawford. | June 25-Aug. 5. July 5-Aug. 5. July 8-Aug. 8. July 11-21. July 30-Aug. 20. |
| Sonoma and Contra Costa Counties¹ (central coast). | Alexander Triumph Early Hale Tuskena 2 Early Crawford Foster Eiberta Muir McKevitt Heath | | , | Strawberry Orange. Late Crawford. Strawberry Cling Yellow Cling. Elberta. Yellow Free. Muir. Susquehanna. Lemon Cling. Picquet. McDevitt. | July 30-Sept. 18. July 30-Oct. 31. Aug. 2-Sept. 3. Aug. 4-Oct. 13. Aug. 4-Sept. 13. Aug. 4-Sept. 16. Aug. 8-Sept. 16. Aug. 15. Do. Aug. 20. Aug. 20. |
| Sutter and Yuba Coun- ties 3 (cen- tral valley). | Tuskena ² | July 15-Aug. 5. Aug. 1-15. Do. Do. Aug. 10-20. Aug. 15-30. Do. Do. Do. Sept. 1-15. Do. | COLORADO. Mesa County (west, Grand Valley). | Salway. Levy. Phillips. Norris. Carman. Early Crawford. Foster. Elberta* Salway. | Aug. 24-Sept. 4. Sept. 3-Oct. 4. Sept. 3-Oct. 10. Sept. 4-20. Sept. 8-20. |
| Solano County (central val- ley).5 | Levy. Sneed. Alexander 6. Garland. Triumph 6. St. Join 6. Dewey. Early Hale 6. Strawberry. Early Crawford 6 Foster 6. | Sept. 10–25. May 28. May 29-June 18. June 5. June 11–30. June 13-July 9. June 16–25. June 22–July 5. June 30–July 12. June 30–July 22. July 4–24. | Montrose County (west). | Sneed. Triumph Greensboro. Carman Early Crawford Elberta ⁸ Muir Early Hale. Early Crawford. Elberta ¹¹ Lovell ¹² | Aug. 20 Sept. 5-15. Sept. 5-10. |
| | Decker. Orange Cling. Mary (Mary's Choice). Susquehanna 6. Yellow Free. Elberta 6 Late Crawford Lovell. Picquet. Salway 6. | July 4-18. July 14-29. July 15-24. July 23-Aug. 4. July 25. July 24-Aug. 8. July 30. Sept. 2. Sept. 5. | Montezuma County (southwest)13 | Triumph Bishop. Mountain Rose. Champion. Family Favorite St. John Foster Oldmixon Free. Elberta. Washington. | Sept. 1. Sept. 5. Sept. 10. Sept. 10-15. Do. |
| Butte County (northern valley). | Muir 7 Lovell 7 | Aug. 10-20. Aug. 20-30. | Larimer County (north cen- tral). | Greensboro Belle. Elberta | Sept. 5. |

Peach interests are less important in these counties than in many other parts of the State.
 This is generally known in California by its synonym Tuscan.
 Except as stated in the next footnote, this list comprises the leading clingstone varieties grown in California.

4 These are freestone varieties. While they are canned to a considerable extent, they are the leading varieties grown in California for drying.

This variety excess commercially.

The delevation is about 6,000 feet.

This is grown to a very limited extent for drying.

This variety excels commercially.

This is grown to a limited extent for drying and canning.

13 The elevation is 6,400 feet.

fornia that are largely used for canning.

The peaches grown in Cannorma for Grying.

The peaches grown in this section are largely shipped in the fresh state. The wide range in dates of ripening is due to the difference in the location of the orchards. The dates show when the first shipment was made of the different varieties from different orchards in the vicinity of Vacaville in the season of 1913.

The varieties thus designated are the principal sorts grown in this locality. The other varieties are grown only in small quantities.

These varieties are grown here almost exclusively for drying.

This variety excels commercially. The other varieties are grown but little.

Lists of peach varieties, showing approximate dates and sequence of ripening in different sections, arranged by States and counties—Continued.

| State and section. | Varieties. | Begin to ripen. | State and section. | Varieties. | Begin to ripen. |
|--|--|--|------------------------------------|---|---|
| CONNECTICUT. | | | GEORGIA—con. | | |
| Middlesex and New Haven Counties (south). | Mayflower Greensboro Waddell Carman Hiley Mountain Rose. | July 28-Aug. 10. Aug. 8-15. Aug. 10-18. Aug. 20-25. Aug. 25-Sept. 5. | Habersham C o u n t y (northeast). | Belle Elberta Fox Heath | July 10. July 20. Aug. 20. Sept. 25. |
| | Champion Belle. Early Crawford. Elberta. Stump. Late Crawford. Chairs. | Sept. 1-10. Sept. 1. Sept. 5-15. | Canyon County (southwest). | Carman. Minnie (Alton) Elberta. Lovell. Salway | Aug. 1-5. Aug. 5-10. Aug. 28-Sept. 12 Sept. 10-20. Sept. 15-Oct. 18 |
| | Fox. Iron Mountain. Stevens. Salway. Bilyeu. | Sept. 20–25. Oct. 1–10. Oct. 5–10. Oct. 10. | Kootenai County (north). | Mayflower Alexander Early Hale Triumph Carman Minnie (Alton) | July 15. July 15–25. July 20. July 25. Aug. 1. |
| Tolland and Litchfield Counties (north cen- | Greensboro | Aug. 1. Aug. 10. Aug. 20. Do. | illinois. | ChampionElberta | Aug. 10. Aug. 20. Aug. 25. |
| tral and northwest). | Champion. Belle. Oldmixon Free. Elberta. Stump. Crosby. Fox. Stevens. Smock. | Aug. 25. Aug. 30. Sept. 1–10. Sept. 5. Sept. 10. Do. Sept. 25. Sept. 28. Oct. 1. | Jackson County(south). | Mountain Rose. Washington. Ede. Elberta. Oldmixon Cling. Oldmixon Free. Stump. | July 30. Aug. 10. Do Do. Aug. 13. Aug. 20. Do. |
| DELAWARE. | | | | Stevens | Sept. 1. Do. |
| Sussex County (south). | GreensboroCarmanChampionOldmixon FreeBelleElbertaLate CrawfordStevensSmock | July 10. July 25. Aug. 1. Aug. 10. Do. Aug. 15. Aug. 20. Aug. 30. Sept. 5. | Cumberland County (east central). | Ward Smock Heath Carman Waddell Minnie (Alton) Champion Elberta | Sept. 10. Sept. 15. Aug. 1-5. Aug. 2-10. Aug. 15-20. Aug. 20-30. Aug. 25-30. |
| Kent County (central). | Champion Belle Reeves Elberta | Aug. 10. Aug. 15. Aug. 20. Aug. 25. | McDonough County (west central). | Sneed | July 1-15. Aug. 15-20. Do. Sept. 1-15. Sept. 5-15. |
| FLORID▲. | | | INDIANA. | | |
| Volusia Coun- ty (east cen- tral). | Jewell Suber Angel Hall Yellow Waldo | May 10–20. Do. May 25–June 1. Do. Do. | Jennings County (southeast). | Champion Mountain Rose Early Crawford. Oldmixon Free Elberta | Aug. 1. Aug. 15. Aug. 20. Do. Aug. 25–30. Sept. 10. |
| Alachua and Putnam Counties (north). | Jewell | May 25-June 5. June 1-15. June 15. June 20-25. July 1. | Rush and Hamilton Counties | Smock Heath Alexander Greensboro Carman | July 10. July 15-20. |
| GEORGIA. Macon, Houston, and Crawford Counties (central). | Mayflower Greensboro Carman Waddell Hiley Belle Elberta. | May 20-June 5. May 25-June 10. June 5-20. June 10-15. June 15-25. June 20-July 2. July 1-10. | (central). | Triumph. Champion. Early Crawford. Foster. Belle. Kalamazoo. Oldmixon Free. Elberta. Arctic. Late Crawford. | July 25. Aug. 15. Aug. 25. Do. Sept. 1. Sept. 10. Do. Sept. 15. Sept. 25. |
| Hancock County(east central). | Carman | June 18–20. June 26–July 8. July 8–15. July 8–18. July 12–22. | | Hannah Lemon Cling Wonderful | Sept. 25. Sept. 25. Do. Oct. 1. Oct. 5. |

Lists of peach varieties, showing approximate dates and sequence of ripening in different sections, arranged by States and counties—Continued.

| State and sec- tion. | Varieties. | Begin to ripen. | State and sec- tion. | Varieties. | Begin to ripen. |
|--|---|--|---|--|--|
| IOWA. Henry and Wayne Counties (southeast). | Alexander Triumph Forbes. Champion Early Crawford. | July 10-25. July 25-Aug. 5. Aug. 1. Aug. 10-31. Aug. 25-Sept. 5. | LOUISIANA. Bienville Parish (northwest). | Early Wheeler Greensboro Carman Belle Elberta | |
| | Bokhara. Crosby. Elberta. Late Crawford. Heath. | Aug. 25–Sept. 5. Aug. 28–Sept. 5. Sept. 1. Sept. 4–10. Sept. 5–20. Sept. 15–Oct. 10. | Caroline County (east). | Carman Bello Reeves Mary (Mary's Choice). | July 20-30. July 25-Aug. 5. Do. Do. |
| KANSAS. | Smood | Turno 15 | | Elberta Bequette Free | July 30-Aug. 10 |
| Barber County (south central). | Sneed Triumph Greensboro Carman Champion Early Crawford Foster | June 15. July 1. July 10. July 15. July 20. Aug. 1. Do. | Washington | Bequette Cling. Oldmixon Free. Chairs. Late Crawford. Heath. | Aug. 5-15. Do. Aug. 10. Aug. 15-25. Do. Aug. 25-30. |
| | Foster. Chinese Cling Elberta Late Crawford Stevens. Globe. Wonderful M a m m o t h | Aug. 15. Do. Sept. 1. Sopt. 15. Sept. 25. Oct. 1. Oct. 15. | Washington County (west). | Troth Carman Champion Early Crawford Chinese Cling St. John Mountain Rose | Aug. 1–15. Aug. 5–15. Aug. 8. Aug. 10 |
| | Heath. Levy (Henri-etta). | Oct. 20. | | Oldmixon Free Reeves Moore | Aug. 10-25. Do. |
| Douglas, Franklin, | Sneed | June 15. | | Elberta Late Crawford Stump | Do. Aug. 25–Sept. 1. |
| Johnson, and Morris Counties (east central). | Arp. Alexander. Triumph. Dewey. Early Crawford. Mountain Rose. Champion. Belle. Oldmixon Free. | June 25. June 25-30. July 10-15. July 15. Aug. 1. Aug. 10-30. Aug. 15-Sept. 15. Do. | | Fox Chairs McCollister Geary Wonderful Salway Levy. Wilkins Heath | Sept. 1-7. Sept. 5-20. Sept. 10-25. Sept. 15. Sept. 20-25. Sept. 20. Sept. 20-30. Oct. 1-5. |
| | Elberta Fitzgerald Late Crawford Chairs | Aug. 20-Sept. 15. Aug. 25-Sept. 15. Sept. 1-20. Sept. 5-15. | MASSACHU- SETTS. | Heath Bilyeu | Oct. 15. |
| | Mathews Smock Gold Drop Beers Smock Wonderful Salway | Sept. 12-25. Sept. 15. Sept. 25. Sept. 28. Oct. 1-10. Oct. 5-10. | II a m p d e n C o u n t y (southwest). | Greensboro Carman Hiley Champion Belle. Crosby Salway | Aug. 5. Aug. 15–20. Aug. 20–25. Sept. 1–5. Sept. 5–10. Sept. 20–25. Oct. 1–5. |
| Atchison and Jackson Counties (northeast). | Sneed Greensboro Carman Bishop Champion Elberta Crosby | July 20-25. July 20-30. Aug. 1-20. Aug. 20-Sept. 10. Aug. 20-25. Oct. 10. | Middlesex County (east central). | Greensboro Carman Mountain Rose. Early Crawford Belle. Elberta. Crosby. | Aug. 15–18. Aug. 20. Sept. 1. Sept. 1–12. |
| KENTUCKY. | | | Essex County (northeast). | Victor Sneed 1 | July 25. Do. |
| Warren County (south central). | Carman Champion Early Crawford. Elberta | Aug. 10. | (2020000) | Greensboro Carman Waddell Champion | Aug. 5. Aug. 18 Aug. 15. Aug. 25. |
| Hardin and Bullitt Counties (north central). | Early Crawford. Mountain Rose. Oldmixon Free. Elberta. Late Crawford Admirable. Oldmixon Cling. Smock. Levy (Henrietta.) Heath. Salway. | July 20-Aug. 4. Aug. 8-15. Aug. 10-15. Aug. 15. Aug. 20-Sept. 1. Aug. 25-Sept. 5. Sept. 10. Sept. 15. | | Early York Mountain Rose. Hiley. Belle. Fitzgerald Oldmixon Free. Kalamazoo. Elberta. Crosby¹ Stump Chairs | Aug. 25-30. Aug. 28. Sept. 5-10. Sept. 10-12. Sept. 10-12. Sept. 15-20. Do. Sept. 20. Sept. 20-25. |

¹ These varieties are suggested for home use rather than for market.

Lists of peach varieties, showing approximate dates and sequence of ripening in different sections, arranged by States and counties—Continued.

| 04-4 | | | a | | |
|--|--|---|---|---|--|
| State and sec- tion. | Varieties. | Begin to ripen. | State and section. | Varieties. | Begin to ripen. |
| MICHIGAN. Berrien, Van Buren, and | Dewey | Aug. 15. Aug. 15–20. | NEW HAMPSHIRE. | | |
| Bureń, and Allegan Counties (southwest). | Lewis St. John Champion Engle Kalamazoo New Prolifie Belle Fitzgerald Elberta Gold Drop | Aug. 25–30, Aug. 28. Aug. 28–Sept. 10. Sept. 1–10. | Hillsboro and Merrimack Counties (south central). | Triumph. Carman Waddell. Mountain Rose. Champion. Early Craw ord. Elberta. Crosby. | Aug. 15. Aug. 20-Sept. 1. Aug. 25. Sept. 1-15. Do. Sept. 5-10. Sept. 10-20. Sept. 15-20. |
| | Lemon Free. Beers Smock. Smock Salway Ailesworth. | Sept. 1-8. Sept. 1. Sept. 1-8 Sept. 5-15. Sept. 12-25. Sept. 15-Oct. 1. Sept. 15-25. Sept. 20-25. Sept. 20-Oct. 5. Sept. 25. | Burlington and Cum- berland Counties (south and west cen- | Greensboro Waddell Carman Mountain Rose Hiley Champion | July 15-Aug. 1. July 25-Aug. 10. Aug. 1-10. Aug. 5-10. Do. |
| Eaton County (south cen- tral). | Lewis. Engle. Kalamazoo. Elberta. Chili. Gold Drop ¹ . | Sept. 15. Sept. 20. Sept. 25. | tral). | Oldmixon Free. Belle. Elberta. Fox. Stump. Late Crawford. Iron Mountain. | Aug. 10-15. Aug. 15-25. Aug. 15-20. Aug. 20-25. Aug. 25-Sept. 10. Sept. 1. Sept. 1-5. Sept. 15-20. |
| Grand Traverse County (northwest, lower peninsula). | Alexander Rivers Triumph Dewey Fitzgerald Early Crawford Crosby New Prolific Elberta Chili | Aug. 1. Aug. 5. Aug. 10. Do. Sept. 10. Sept. 15. Do. Sept. 20. Sept. 18. Oct. 1. | Middlesex, Monmouth, and Union Counties (east central). | Carman Ray Belle. Elberta Ellison. Willett. Stump Stevens. Keyport. | Aug. 10–20. Aug. 10–Sept. 1. Aug. 15–Sept. 1. Aug. 25–Sept. 10. Sept. 1-20. Do. Sept. 7. Sept. 15. Sept. 20. |
| MISSOURI. | | | NEW MEXICO. | | |
| Oregon County 2 (south central). Howell County 4 (south central). | Elberta ³ | July 28-Aug. 8. Aug. 10-15. | Chaves and Eddy Counties (southeast, Pecos Valley). | Victor Alexander Dewey Triumph Greensboro Carman 6 Ray | June 20–25. July 10. July 4. |
| Wright County 6 (south central). | Carman Champion Elberta Salway | Not reported. | | Texas (Texas King). Mamie Ross. Family Favorite Superb 6. Champion 6. | July 25. July 25-Aug. 1. |
| Cole County (central). | Greensboro Carman Mountain Rose . Elberta Heath | June 25–July 10. July 25–30. Aug. 1–15. Aug. 25–Sept. 10. Sept. 25–Oct. 10. | | Elberta 6. Late Crawford. Crosby. Beckett. Lee. Salway. | Aug. 1-5. |
| NEBRASKA. | | , | | Levy Krummel | Oct. 1. |
| Varieties most commonly found in the State. | Alexander Triumph Rivers Early Hale Champion Crosby Chili Russell Wright Heath Salway | | Dona Ana County (south cen- tral). | Alexander Rivers Triumph Carman Texas (Texas King). Mamie Ross Early Crawford. | June 20-30. June 20. July 15-20. |

¹ This is one of the most hardy varieties.
2 The elevation is about 960 feet.
3 Other varieties are grown in these counties, but the Elberta is the only one of real commercial importance.
4 The elevation is about 1,240 feet.
5 The elevation is about 1,680 feet.
6 Considered by some to be the most desirable varieties for commercial purposes.

Lists of peach varieties, showing approximate dates and sequence of ripening in different sections, arranged by States and counties—Continued.

| State and sec- tion | Varieties. | Begin to ripen. | State and sec- tion. | Varieties. | Begin to ripen. |
|--|---|--|--|---|---|
| NEW MEXICO— continued. | | | NORTH CARO- LINA. | | |
| Dona Ana County (south cen- tral)—Con. | Elberta. Late Crawford. Keith. Crothers. Lemon Cling. Salway. | Aug. 20-25. Sept. 20-25. | Moore County (central). | Mayflower Alexander Greensboro Carman Belle Elberta | June 1. June 10. June 20. July 5. July 15. July 20. |
| San Juan County (northwest). | Alexander Triumph Carman Champion 1 Elberta 1 Krummel Salway | July 25-Aug. 15. July 15-Aug. 15. Aug. 15-Sept. 1. Aug. 25-Sept. 1. Sept. 1-10. Oct. 1-10. Oct. 5-10. | Lawrence, Clermont, and Ross Counties (south). | GreensboroRivers. Carman | July 1. July 15. July 20. Aug. 1–15. Aug. 1–10. Aug. 5–20. |
| Nassau and Suffolk Counties (southeast, Long Is- land) | Carman | Not reported. | | Reeves. Elberta Late Crawford. Stump. Chairs. Smock. Wonderful Beers Smock. Salway. Heath. | Aug. 8-25. Aug. 10-Sept. 1. Aug. 15. Aug. 15-Sept. 1. Sept. 5. Sept. 10-20. Sept. 15. Do. Sept. 20-25. Oct. 1. |
| Westchester, Dutchess, and Ulster Counties (southeast, Hudson River Val- ley). | Greensboro | July 25. Aug. 15–20. Aug. 25. Sept. 1–10. Sept. 1. Sept. 25. | Summit, Lu- cas, and Lake Coun- ties (north). | Carman St. John. Champion New Prolific Kalamazoo. Belle Elberta Gold Drop. | Aug. 5–20. Aug. 10–25. Aug. 25–Sept. 25 |
| Tompkins and Yates Coun- ties (cen- tral). | Greensboro Carman Champion St. John Early Crawford. Elberta Crosby | Aug. 1-20. Do. Aug. 20. Aug. 25-30. Sept. 1. Sept. 1-15. Sept. 5-10. | OKLAHOMA. | Stump. Crosby. Lemon Free. Smock. Salway. | Sept. 1. Sept. 1-15. Sept. 10-20. Sept. 15-25. Sept. 20-Oct. 1. |
| | Chili Morris Stevens Stump Late Crawford Smock Fox Iron Mountain Salway | Do. Sept. 10. Sept. 15–25. Sept. 15. Sept. 20. Sept. 20-30. Sept. 25-30. Oct. 1–10. | Cherokee, Logan, and Canadian Counties (central). | MayflowerSneedEarly WheelerMamie RossHileyChampionElberta.KrummelSalway | June 1. Do, June 1-10. June 10. July 10-20. July 20. Aug. 1-20. Sept. 15. Oct. 1. |
| Oswego, Wayne, and Niagara Counties (west). | Triumph. Greensboro. Rivers. St. John. Early Crawford. Mountain Rose. Fitzgerald. Niagara. Foster. Champion. Wheatland. Elberta. Late Crawford. Lamont. | Aug. 15. Aug. 20. Do. Do. Sept. 1-10. Sept. 5-10. Sept. 6-20. Sept. 8-15. Sept. 10-15. Sept. 10-25. Sept. 20-25. Sept. 20-30. | OREGON. Jackson County (southwest). Umatilla County (northeast). | Alexander | July 15. Aug. 1. Aug. 15. Sept. 15. Oct. 15. July 15. Aug. 1. |

¹ These are considered the best varieties for commercial purposes.

2 The following varieties named in the approximate order in which they are reported to ripen are given by the New York Agricultural Experiment Station (Circular 15, revised) as the "most worthy of consideration": Rivers, Greensboro, Eureka, Carman, Minnie (Alton), St. John, Waddell, Pearson, Foster, Stevens, Champion, Fitzgerald, Niagara, Belle, Early Crawford, Elberta, Oldmixon Free, Ede, Crosby, Late Crawford, Kalamazoo, Chili, Lamont, Smock, Salway.

From the same circular the following information regarding the hardiness of varieties is taken: "The five varieties of peaches most hardy in wood are Crosby, Chili, Stevens, Gold Drop, and Elberta. The Crawfords are considered most tender in wood. The five varieties of peaches most hardy in bud are Crosby, Chili, Triumph, Gold Drop, and Stevens. The five most tender in bud are the Early Crawford, Late Crawford, Chairs, Reeves, and Elberta."

3 This variety is recommended for home use.

Lists of peach varieties, showing approximate dates and sequence of ripening in different sections, arranged by States and counties—Continued.

| State and section. | Varieties | Begin to ripen. | State and section. | Varieties. | Begin to ripen. |
|---|--|--|---|--|---|
| PENNSYLVA- NIA. | | | SOUTH CARO- LINA—con. | | |
| Bucks County (southeast). | Mountain Rose Champion Early Crawford. Elberta Late Crawford Chairs Stevens Beers Smock | July 15. Aug. 1. Sept. 1. Sept. 15. Sept. 20. Sept. 25. Oct. 1. | Pickens County (west). | Sneed. Greensboro. Carman. Mamie Ross. Connet. Belle. Elberta. | May 10-28. June 1-15. June 18-30. June 20-July 2. July 10-25. |
| Berks County (southeast). | Greensboro | July 15–20. Aug. 4–10. Aug. 21–28. Aug. 15–Sept. 5. Aug. 25–Sept. 10. | lina (entire State).2 | Greensboro | May 25–June 5. June 1–10. June 10–20. June 20–July 4. July 6–15. July 15–Aug. 1. Aug. 5–18. Sept. 8–20. Oct. 10–20. |
| Clinton and Northum- berland Counties (center). | Sneed. Carman Slappey. Mountain Rose. Belle. Reeves. Oldmixon Free. Elberta Late Crawford. Crosby. | July 10-15. Aug. 1-10. Aug. 15-20. Do. Aug. 25-30. Do. Sept. 1-15. Do. Sept. 10-15. Do. | TENNESSEE. Rhea County (southeast). | Carman | July 5-10. July 15-20. July 25. |
| W | Stump. Fox. Chairs. Smock Salway. Bilyeu | Sept. 15–20. Do. Sept. 20–25. Sept. 25–30. Sept. 30–Oct. 5. Oct. 1–7. | Bedford County (central). | Smock Bilyeu Carman Champion Belle Elberta Crothers | Not reported. |
| Wayne County (northeast). | Sneed Canada. Greensboro 1 Carman 1. Champion 1. Fitzgerald Hiley. Belle 1. | July 18, July 31, Aug. 2. Aug. 23, Aug. 28, Sept. 4, Sept. 8, Sept. 12, | Blounty County (east cen- tral). | Sneed. Greensboro. Carman Belle. Elberta Thurber. | May 25-June 5. June 10-25. June 25-July 10. July 15-30. July 20-Aug. 5. Do. |
| | Ede. Ray. Reeves. Elberta ¹ Crosby. Late Crawford. Iron Mountain. Salway. | Do. Do. Do. Sept. 20. Do. Sept. 25. Do. Sept. 30. | Claiborne County (northeast). | Alexander St. John Mountain Rose. Belle. Elberta | June 20. July 4. July 15. Aug. 5. |
| RHODE ISLAND. Newport County (southeast). | Victor | Aug. 10. Aug. 25. Sept. 1. Sept. 5. Do. Sept. 10. Sept. 20. | Bexar and Victoria Counties (southeast). | Clara Early China Honey Triumph Imperial Pallas Gardina Rupley Alice Cabler | June 1. Do. June 5. June 14. July 1. Do. Do. July 15. Do. July 20. Do. Do. |
| SOUTH CARO- LINA, | ~ . | | | Maggie Onderdonk Lola Edith | Do. July 25. Do. |
| Aiken and Lexington Counties (central). | Sneed Alexander Greensboro St. John Elberta | May 20. June 10–20. | | Galveston. Guadalupe Texas. Mary. Orman. | Aug. 5. Aug. 10. Do. Aug. 25. Sept. 1. |

These varieties are the principal commercial sorts.
 See South Carolina Agricultural Experiment Station Circular No. 21, entitled "Peach Culture for South Carolina," by C. F. Niven, wherein a list of varieties adapted to the entire State is given.

Lists of peach varieties, showing approximate dates and sequence of ripening in different sections, arranged by States and counties—Continued.

| State and section. | Varieties. | Begin to ripen. | State and sec- tion. | Varieties. | Begin to ripen. |
|--|---|---|--|--|--|
| TEXAS—con. | | | VIRGINIA—con. | THE CONTRACTOR WAS MADE TO SERVICE TO SERVIC | |
| McLennan, Kaufman, and Mon- tague Coun- ties (north- | Sneed. Swan. Early Wheeler. Arp. Carman. | May 25. Do. June 1. June 2. June 10–15. | Botetourt County (west). | Greensboro Carman Champion. Elberta. | July 1. July 5. July 15. Aug. 1. |
| east). | Mamie Ross. Champion Elberta Chilow Munson Weaver Stinson | June 10-19. June 15-25. July 1-10. July 4-15. July 15. July 25. Aug. Sept. | Albemarle County (cen- tral). | Oldmixon FreeGlobe Elberta. Late Crawford Heath Albright. Bilyeu | Aug. 3-10. Sept. 25-30. Oct. 1-10. Sept. 25-Oct. 10 |
| Limestone ¹ County (northeast). | Victor Early Wheeler Swan Carman. | | Elizabeth City County (east). | Greensboro Carman Elberta | Not reported. |
| | Mamie Ross. Leona Elberta Tena. Gilbert Millard Frank | | Fairfax and Loudoun Counties (north). | Greensboro | June 20. July 15–25. Aug. 10–20. Do. Aug. 15–25. Sept. 15–20. |
| | Lizzie Barbara Katie. | | WASHINGTON. | Oldmixon Cling. Salway | Sept. 20. Oct. 1–15. |
| Deaf Smith and Hale Counties (northwest, Panhandle). | Alexander Triumph Mamie Ross Champion Family Favorite Elberta Landrum Buttram | June 25-July 1. July 5-10. July 5-15. July 20. Do. July 25. Aug. 25. Sept. 15. | Benton and Yakima Counties (south central, Yakima Valley). | Alexander Early Hale Champion. Early Crawford. Slappey. Elberta. Late Crawford | July 10. July 15. July 25. Aug. 5. Aug. 10. Aug. 15–20. Aug. 20. |
| UTAH. | Dalmont Horlacher Krummel | 7 | Chelan County (central). | SneedAlexanderEarly HaleTriumph | July 10. July 15. July 15–20. July 25–Aug. 10. |
| Washington County (southwest). | Briggs. Greensboro. Elberta | July 1. July 4. Aug. 15. | | Early Crawford. Elberta. Late Crawford. Krummel. | Aug. 10. Aug. 25. Aug. 25–30. Oct. 1. |
| Box Elder, Utah, and Weber Coun- | Muir Heath Elberta 2 | Aug. 25. Sept. 20. Sept. | Stevens County (northeast). | Early Crawford. Niagara | Sept. 8. Sept. 10. Sept. 15. Sept. 20. Oct. 1. |
| ties (central and northern). | | | WEST VIR- GINIA. | | |
| Windham County | Alexander | Aug. 15-20. | Morgan, Hampshire, and Mineral Counties | Carman Connet Hiley Champion | July 25-Aug. 5. Aug. 1-10. Aug. 5-10. Aug. 10-20. Aug. 15-20. |
| (southeast). | Canada. Early Crawford. Niagara. Oldmixon Free. Elberta. Stump | Sept. 1–15. Sept. 20. | (northeast). | Belle. Oldmixon Free. Reeves. Elberta Fox. Walker | Aug. 18-20. Aug. 20-25. Aug. 20-Sept. 5 |
| VIRGINIA. | Crosby Late Crawford | Sept. 25. | | McCollister Beers Smock | Sept. 1–20. Sept. 20–25. Sept. 20–30. Do. Do. |
| Wythe County (southwest). | Belle Champion Fitzgerald | July 25. Aug. 1. | | Smock Wonderful Levy Heath | Sept. 25–30. Do. Oct. 1–10. Do. Do. |
| | FosterElberta | Aug. 10-15. | | Salway Bilyeu | Oct. 10-25. |

¹ These varieties have received special attention in this county, where a considerable proportion of them originated. Nearly all of them belong to the "North China" or "Chinese Cling" group. This list of varieties, substantially as it here appears, was originally presented by Mr. J. W. Stubenrauch, of Texas, before a meeting of horticulturists held at Dallas, Tex., and later published in Farm and Ranch (issue of Feb. 28, 1913, p. 9). They are named in about the order in which they ripen, this period for the entire list continuing for 3 to 4 months.

² This variety is grown almost to the exclusion of all other sorts.

COMMENTS ON THE FOREGOING LISTS.

As already stated, the foregoing lists are made up in nearly every case of varieties mentioned by growers in response to a request sent them from the Department of Agriculture to name the sorts which were considered the most satisfactory under their respective conditions. They represent practically the entire portion of the country where peaches are grown at all, including many sections in which this fruit is not a commercial product.

Several interesting observations are suggested by these lists. The comparatively small number of varieties which compose them is noticeable. The remarkably wide distribution of a considerable number of varieties, as is shown by the large proportion of the lists in which certain sorts occur, will at once appeal to those who are studying varietal adaptability.

The fact is striking that in response to a request for the names of the most satisfactory varieties, growers all over the country reported, with but few exceptions, only the older and thoroughly tested sorts; and, conversely, the almost entire absence from these lists of recently introduced varieties stands out conspicuously to those who are familiar with peach nomenclature.

This omission of the newer sorts does not mean that they are not being planted, but it probably does indicate that growers generally are not yet satisfied that the recently introduced varieties are superior to those with which they are already familiar. Perhaps it may suggest also the desirability of greater familiarity on the part of peach growers with the more promising of the newer sorts. But variety testing is expensive. Not many commercial peach growers have either the time or the inclination to take up this type of work. Yet the only way in which the real value of a new variety can be determined is to grow it. The fact that a variety is adapted to the conditions in one region proves little or nothing with regard to its value in another region, where the conditions are different. In some of the important peach-growing districts, especially where there are good cooperative fruit-growers' organizations, a community variety-test orchard might be a practicable enterprise.

CLASSIFICATION.

In the present connection, only a brief mention of peach classification can be made. Probably the first system that was worked out is the one proposed by Mr. Gilbert Onderdonk, of Texas, and published by the Department of Agriculture in 1887.¹

The basis of this classification is primarily regional, and the names applied to the classes or races largely represent the section of country

¹See Report of the Commissioner of Agriculture, 1887, pp. 648-651. Considerable valuable information regarding peach classification has also been contributed by Prof. R. H. Price in Texas Agricultural Experiment Station Bulletin 39, entitled "The Peach."

in which the different races originated or from which they were disseminated. Though several modifications of the "Onderdonk system" of classification have been proposed, it is the one which is most widely recognized at the present time. The five races of peaches indicated in this system are (1) Peen-to, (2) South China, (3) Spanish, (4) North China, and (5) Persian.

The significance of these different races in the adaptability of varieties to the different peach-growing districts of the country is indicated in the following comments.

(1) Peen-to race.—The Peen-to race or group takes its name from the original variety, the Peen-to, which was introduced into this country in 1859 by the late P. J. Berckmans, of Augusta, Ga. With the exception of this member of the group, every variety which now belongs to it, according to Hume, has originated in Florida.

These varieties are essentially adapted to subtropical conditions and very largely comprise the peach industry of the extreme southern portion of the country. Other important varieties of this group are the Angel, Bidwell Early, Bidwell Late, Clara, Hall, Jewell, Maggie, Suber, and Waldo. The characteristic shape of the Peen-to variety is shown by the small figure at the left in the illustration on the title-page.

- (2) South China race.—The South China race is perhaps now more commonly designated as the Honey group,² the first variety of the group to be grown in the United States having borne that name. With few exceptions, the varieties which now compose this group have originated in Florida. Like the members of the Peen-to race, they are adapted to a subtropical climate, but their range of adaptability extends farther north than that of the members of the Peen-to race. They may be grown in central and northern Florida and in the southern parts of Georgia, Alabama, Mississippi, Louisiana, and Texas. Some of the more important varieties are the Climax, Colon, Florida Gem, Imperial, Pallas, Taber, and Triana. The characteristic shape of the Honey variety is shown by the small figure at the right in the illustration on the title-page.
- (3) Spanish race.—The Spanish race was so designated by Mr. Onderdonk in his classification because he was unable to trace it with certainty farther back than Spain. The varieties that comprise this list, like those of the two races already discussed, are adapted to southern latitudes, but their range of adaptability does not extend as far south as does that of the members of those races. It does, however, reach somewhat farther north, as indicated by Onderdonk and others. Some of the varieties of this group as given

¹ For a full account of this group, see Florida Agricultural Experiment Station Bulletin 62, entitled "The Peen-to Peach Group," by II. Harold Hume.

³ For a full account of the Honey group of peaches, see Florida Agricultural Experiment Station Bulletin 73, entitled "The Honey Peach Group," by F. C. Reimer.

by Price are the Cabler, Druid, Galveston, Guadalupe, La Reine, Onderdonk, Texas, and Victoria.

(4) North China race.—Because of the fact that the Chinese Cling variety of peach was the progenitor of the North China race in the United States, Powell¹ has suggested, with consistency, the term "Chinese Cling group" in place of the one originally used as the name of the race.

This group has assumed great importance because of the wide range of adaptability and great commercial importance of some of the varieties which are commonly designated as belonging to it. The trees of this group are generally hardy, vigorous, and spreading in habit of growth.

Chandler,² of the Missouri experiment station, has called attention to the fact that, as a rule, the varieties of this group are among

the "slowest to finish their resting period."

Some of the most important varieties of this group are the Belle, Carman, Connet, Elberta, Family Favorite, Greensboro, Hiley, Lee, Lola, Mamie Ross, Ray, Rivers, Superb, Thurber, and Waddell.

It should be stated that several of these varieties, including the Elberta, are undoubtedly crosses between some member of the Chinese Cling group and one belonging to the Persian or some other group. In some particulars they resemble the latter parent. For instance, the Elberta is mentioned by Chandler as being an exception to the general rule that varieties of this group are slow in finishing their resting period. The fact that the Elberta starts quickly and is "tender in bud" is widely recognized. It is a seedling of the Chinese Cling crossed by a Persian variety—probably the Early Crawford. The general form of the Elberta is indicated by the largest figure in the illustration on the title-page.

(5) Persian race.—As the result of his investigations of the Persian race, Mr. Onderdonk concluded that—

The race includes all varieties springing from the importation from Persia to Italy during the reign of the Emperor Claudius, which was introduced into Great Britain about 1550 and to the American colonies about 1680.

These varieties, as a rule, blossom relatively late. Many of them are grown extensively in the northern peach districts, as well as in middle latitudes. Some of the important varieties placed by Price in this group are the Crothers, Foster, Heath, Gold Drop, Late Crawford, Lemon Cling, Mountain Rose, Oldmixon Free, Reeves, Salway, Walker, and St. John.

¹ See Delaware Agricultural Experiment Station Bulletin 54, entitled "The Chinese Cling Group of Peaches," by G. Harold Powell.

² See Missouri Agricultural Experiment Station Bulletin 74, entitled "The Winter-Killing of Peach Buds as Influenced by Previous Treatment," by W. H. Chandler.

